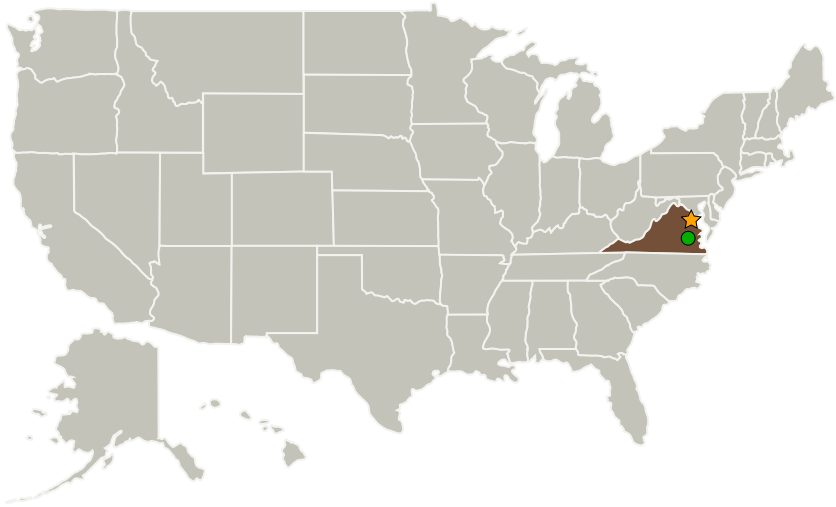
Phase IIE funding to flight harden a Methane DIAL Transmitter

Completed Technology Project (2014 - 2015)

Project Introduction

Complete development of an aircraft flight hardened, pulsed 1.645 µm optical parametric oscillator (OPO) laser transmitter for Methane DIAL in a flight-like package. Demonstrate 1 kHz pulse repetition rate wavelength switching between DIAL wavelengths Demonstrate high spectral purity laser output (>99.9) at 1 kHz wavelength switching rate Deliver a fully packaged laser electronics module

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★NASA Headquarters(HQ)	Lead Organization	NASA Center	Washington, District of Columbia
●Langley Research Center(LaRC)	Supporting Organization	NASA Center	Hampton, Virginia

Primary U.S. Work Locations
Virginia

Phase IIE funding to flight harden a Methane DIAL Transmitter

Table of Contents

Organizational Responsibility

Responsible Mission Directorate:

Science Mission Directorate (SMD)

Lead Center / Facility:

NASA Headquarters (HQ)

Responsible Program:

Earth Science

Phase IIE funding to flight harden a Methane DIAL Transmitter

Completed Technology Project (2014 - 2015)

Project Management

Program Director:

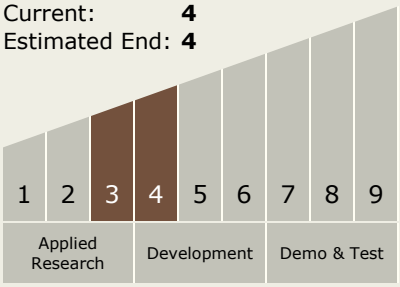
George J Komar

Principal Investigator:

Amin R Nehrir

Technology Maturity (TRL)

Start: **3**
Current: **4**
Estimated End: **4**



Technology Areas

Primary:

- TX08 Sensors and Instruments
  - TX08.1 Remote Sensing Instruments/Sensors
    - TX08.1.5 Lasers

Target Destination

Earth